

Title: Two-diode model for parameters extraction of photovoltaic module under temperature variation

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Abstract: This paper study the effect of redistributing the series resistance in the two-diode model of the PV module according to its physical components, considering the relation of each component to temperature variation. The proposed model divide the series resistance into two materials: metal and semiconductor, constructing the mathematical model for the overall model. The model is found to improve the accuracy in calculating the maximum power point with temperature variation, which contribute to the job of PV power converter designers and circuit simulator developers.